

लोक सेवा आयोग
नेपाल कृषि सेवा, एगू. इन्जिनियरिङ्ग समूह, राजपत्रांकित तृतीय श्रेणीका पदको खुला प्रतियोगितात्मक परीक्षाको
पाठ्यक्रम

यस पाठ्यक्रम योजनालाई दुई चरणमा विभाजन गरिएको छ :

प्रथम चरण :-	लिखित परीक्षा (Written Examination)	पूर्णाङ्क :- २००
द्वितीय चरण :-	(क) सामूहिक परीक्षण (Group Test)	पूर्णाङ्क :- १०
	(ख) अन्तर्वार्ता (Interview)	पूर्णाङ्क :- ३०

परीक्षा योजना (Examination Scheme)

प्रथम चरण : लिखित परीक्षा(Written Examination)

पूर्णाङ्क :- २००

पत्र	विषय	खण्ड	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली		प्रश्नसंख्या × अङ्क	समय
प्रथम	General Subject	Part I: General Awareness & General Reasoning Test	१००	४०	वस्तुगत (Objective)	बहुवैकल्पिक प्रश्न (MCQs)	५० प्रश्न × १ अङ्क	१ घण्टा ३० मिनेट
		Part II: General Technical Subject					५० प्रश्न × १ अङ्क	
द्वितीय	Technical Subject		१००	४०	विषयगत (Subjective)	छोटो उत्तर लामो उत्तर	४ प्रश्न × ५ अङ्क ८ प्रश्न × १० अङ्क	३ घण्टा

द्वितीय चरण : सामूहिक परीक्षण (Group Test) र अन्तर्वार्ता (Interview)

पूर्णाङ्क :- ४०

पत्र / विषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली	समय
सामूहिक परीक्षण (Group Test)	१०		सामूहिक छलफल (Group Discussion)	३० मिनेट
अन्तर्वार्ता (Interview)	३०		बोर्ड अन्तर्वार्ता(Board Interview)	-

द्रष्टव्य :

- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुनेछ ।
- प्रथमपत्र र द्वितीय पत्रको लिखित परीक्षा छुट्टाछुट्टै हुनेछ ।
- वस्तुगत बहुवैकल्पिक (Multiple Choice) प्रश्नहरूको गलत उत्तर दिएमा प्रत्येक गलत उत्तर बापत २० प्रतिशत अङ्क कट्टा गरिनेछ । तर उत्तर नदिएमा त्यस बापत अङ्क दिइने छैन र अङ्क कट्टा पनि गरिने छैन ।
- बहुवैकल्पिक प्रश्नहरू हुने परीक्षामा कुनै प्रकारको क्याल्कुलेटर (Calculator) प्रयोग गर्न पाइने छैन ।
- विषयगत प्रश्नहरूको हकमा तोकिएको अंकको एउटा लामो प्रश्न वा एउटै प्रश्नका दुई वा दुई भन्दा बढी भाग (Two or more parts of a single question) वा एउटा प्रश्न अन्तर्गत दुई वा बढी टिप्पणीहरू (Short notes) सोध्न सकिने छ ।
- द्वितीय पत्रमा(विषयगत प्रश्न हुनेका हकमा) प्रत्येक खण्डका लागि छुट्टाछुट्टै उत्तरपुस्तिकाहरू हुनेछन् । परीक्षार्थीले प्रत्येक खण्डका प्रश्नहरूको उत्तर सोहीखण्डको उत्तरपुस्तिकामा लेख्नुपर्नेछ ।
- यस पाठ्यक्रम योजना अन्तर्गतका पत्र/विषयका विषयवस्तुमा जेसुकै लेखिएको भए तापनि पाठ्यक्रममा परेका कानून, ऐन, नियम तथा नीतिहरू परीक्षाको मिति भन्दा ३ महिना अगाडि (संशोधन भएका वा संशोधन भई हटाईएका वा थप गरी संशोधन भई) कायम रहेकालाई यस पाठ्यक्रममा परेको सम्झनु पर्दछ ।
- प्रथमचरणको परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र द्वितीयचरणको परीक्षामा सम्मिलित गराइनेछ ।
- यस भन्दा अगाडि लागू भएका माथि उल्लेखित सेवा, समूहको पाठ्यक्रम खारेज गरिएको छ ।
- पाठ्यक्रम लागू मिति : २०८०/०७/२०

प्रथम पत्र (Paper I): General Subject

Part (I) : - General Awareness & General Ability Test (50 Marks)

1. **General Awareness and Contemporary Issues** (25 ×1 Mark = 25 Marks)
 - 1.1 Physical, socio-cultural and economic geography and demography of Nepal
 - 1.2 Major natural resources of Nepal
 - 1.3 Geographical diversity, climatic conditions, and livelihood & lifestyle of people
 - 1.4 Notable events and personalities, social, cultural and economic conditions in modern history of Nepal
 - 1.5 Current periodical plan of Nepal
 - 1.6 Information on sustainable development, environment, pollution, climate change, biodiversity, science and technology
 - 1.7 Nepal's international affairs and general information on the UNO, SAARC & BIMSTEC
 - 1.8 The Constitution of Nepal (From Part 1 to 5 and Schedules)
 - 1.9 Governance system and Government (Federal, Provincial and Local)
 - 1.10 Provisions of civil service act and regulation relating to constitution of civil service, organisational structure, posts of service, fulfillment of vacancy and code of conduct
 - 1.11 Functional scope of public services
 - 1.12 Public Service Charter
 - 1.13 Concept, objective and importance of public policy
 - 1.14 Fundamentals of management : planning, organizing, directing, controlling, coordinating, decision making, motivation and leadership
 - 1.15 Government planning, budgeting and accounting system
 - 1.16 Major events and current affairs of national and international importance
2. **General Reasoning Test** (25 ×1 Mark = 25 Marks)
 - 2.1 **Logical Reasoning** (9×1 Mark = 9 Marks)

Verbal Ability, Alphanumeric Series, Reasoning Analogies, Classification, Coding-Decoding, Order & Ranking, Distance & Directions, Analytical and Logical Reasoning, Assertion and Reason, Statement and Conclusion, Input-Output, Venn- diagram
 - 2.2 **Numerical Reasoning** (8×1 Mark = 8 Marks)

Arithmetic Series, Analogy, Classification, Arithmetical Reasoning, Fraction. Percentage, Ratio, Average, Profit & Loss, Time & Work, Date & Calender, Data Sufficiency, Data Interpretation & Data Verification
 - 2.3 **Spatial Reasoning** (8×1 Mark = 8 Marks)

Figure Series, Figure Analogy, Figure Classification, Figure Matrix, Pattern Completion, Embedded Images, Image Formation & Analysis, Mirror and Water Images, Cubes and Dices, Paper Folding & Cutting

Part (II) : - General Technical Subject (50 Marks)

- 1. General Agriculture 10%**
 - 1.1 Principles of agronomy(cereals, cash crops , pulses and oilseed)
 - 1.2 Agro meteorological data recording, collection and analysis and introduction to sunshine recorder, max and min temperature, wind vane, rain gauges, soil temperature and evaporation pan etc)
 - 1.3 Introduction to sociology and rural development
 - 1.4 Elements of soil science(soil fertility, properties and classification)
 - 1.5 Introduction to plant protection(Emphasis on equipment)
 - 1.6 Elements of farm management
 - 1.7 Introduction to horticulture(fruits and vegetables)

- 2. General Engineering**
 - 2.1 Mechanical Engineering 20%**
 - 2.1.1 Work, power and energy
 - 2.1.2 Basic knowledge workshop technology and metallurgy
 - 2.1.3 Fluid Mechanics(compressible and incompressible fluids, viscosity, Bernoulli theorem, Archimedes' principle, buoyancy)
 - 2.1.4 Thermodynamics(laws of thermodynamics, Carnot engine, entropy, enthalpy, Kinetic theory of gases)
 - 2.1.5 Basic knowledge on thermal energy conversion, fossil fuels, refrigerants and psychrometry
 - 2.1.6 Introduction to theory of machines
 - 2.1.7 Design of machines(machines related to agriculture)
 - 2.1.8 Internal combustion engines(petrol and diesel engines)
 - 2.1.9 Engine terminologies

 - 2.2 Electrical Engineering 10%**
 - 2.2.1 Electrical circuits
 - 2.2.2 Fundamentals of electronics
 - 2.2.3 Introduction to computer software and hardware
 - 2.2.4 Basic knowledge on electric machines
 - 2.2.5 Electromagnetic devices and electric power measurements

 - 2.3 Civil Engineering 20%**
 - 2.3.1 Engineering hydrology(hydrological cycle, measurement and analysis of precipitation, measurement, estimation and analysis of runoff, hydrograph)
 - 2.3.2 Engineering materials (cement, brick, steel, timber, sand, stone, aggregate, paints etc.)
 - 2.3.3 Strength of material/ Mechanics (torque, couple moments, moment of inertia, elasticity, , impulse, centripetal and centrifugal forces, gravitational lows)
 - 2.3.4 Design of structures (steel, concrete and timber)
 - 2.3.5 Soil engineering (soil physics, soil mechanics and foundation)
 - 2.3.6 Surveying (plane table, leveling with different types of equipments), topographical, contouring, job layout, etc.)
 - 2.3.7 Building construction technology(brick and stone masonry, carpentry, painting, plastering, concreting roofing, floorings, damp proof course

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2.3.8 Estimating and costing of buildings, Irrigation and other agricultural structures.

2.3.9 Open channel hydraulics

3. Agricultural Engineering 40%

- 3.1 Soil water; soil moisture tension, infiltration, permeability, wilting coefficient and conductivity
- 3.2 Weirs, parashal flumes, cut throat flumes, orifice and meter gates
- 3.3 Tracer method
- 3.4 Plant water relationship, evaporation, transpiration and consumptive use, evapotranspiration(ET) estimation methods
- 3.5 Water requirements, irrigation frequencies, Irrigation efficiencies
- 3.6 Furrow irrigation, border irrigation and check basin Irrigation
- 3.7 Sprinkler and drip/trickle Irrigation
- 3.8 Type of drainage system, Surface and sub surface drainage system
- 3.9 Ground water and aquifers, hydraulics of wells
- 3.10 Water erosion (rain drop erosion, sheet erosion , rill erosion, gully erosion, stream channel erosion)
- 3.11 Human, animal, electrical and mechanical powers
- 3.12 Solar and wind power, energy from agricultural residue and animals waste including biogas,
- 3.13 Scope of agricultural mechanization in Nepal
- 3.14 Tillage requirements and draft power requirement
- 3.15 Tillage implements(traditional animal drawn plough, mold board plough, disc plough, chisel plough, rotavator, harrows
- 3.16 Sowing methods of major crops
- 3.17 Seed drill, planters and their components
- 3.18 Power transmission system and devices (belt, chain, shaft, pulley etc.)
- 3.19 Grain drying theory
- 3.20 Grain pressure theory
- 3.21 Unit operation in seed processing